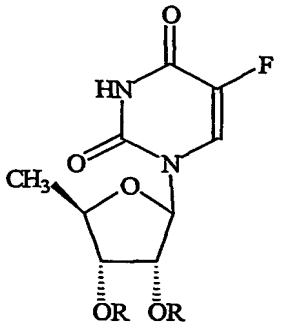
CLAIMS

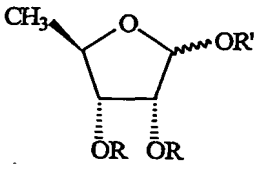
1. A process for preparing a compound of formula



(II)

in which R represents linear or branched C_1-C_5 aliphatic acyl or benzoyl, optionally substituted with C_1-C_5 alkyls, C_1-C_5 alkoxyls or halogens,

which comprises the reaction of coupling of a compound of formula



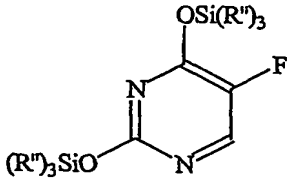
(III)

in which

R represents a linear or branched C_1-C_5 aliphatic acyl or benzoyl, optionally substituted with C_1-C_5 alkyls, C_1-C_5 alkoxyls or halogens,

R' represents R or a linear or branched C_1-C_5 alkyl,

with a compound of formula



(IV)

in which R", being identical or different, represents a C_1-C_6 alkyl or a phenyl, in the presence of a Lewis acid and in an inert organic solvent, characterized in that said Lewis acid is added at a temperature below 0°C.

2. A process according to claim 1 in which said addition of catalyst is carried out at a temperature below –10°C, preferably between approx. –15 and –20°C.

3. A process according to claim 1 in which, on completion of said addition of catalyst, the reaction mixture is held further at the same temperature.

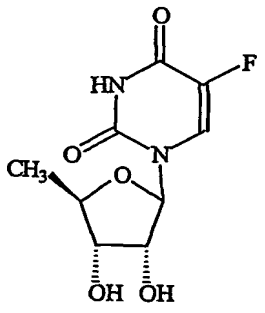
4. A process according to claim 1 in which R and R' represent acyl, preferably acetyl, and R" represents methyl.

5. A process according to claim 1 in which said Lewis acid is selected from trimethylsilyltrifluoromethanesulphonate and tin tetrachloride, and is preferably tin tetrachloride.

6. A process according to claim 1 in which said inert organic solvent is selected from chlorinated solvents or aromatic solvents, preferably chlorinated solvents.

7. A process according to claim 1 in which said compound of formula II, in which R has the meanings stated above, is further submitted to a reaction of deprotection to give doxifluridine of formula I.

8. A process for the preparation of doxifluridine of formula



(I)

that comprises a process according to one of the claims from 1 to 7.